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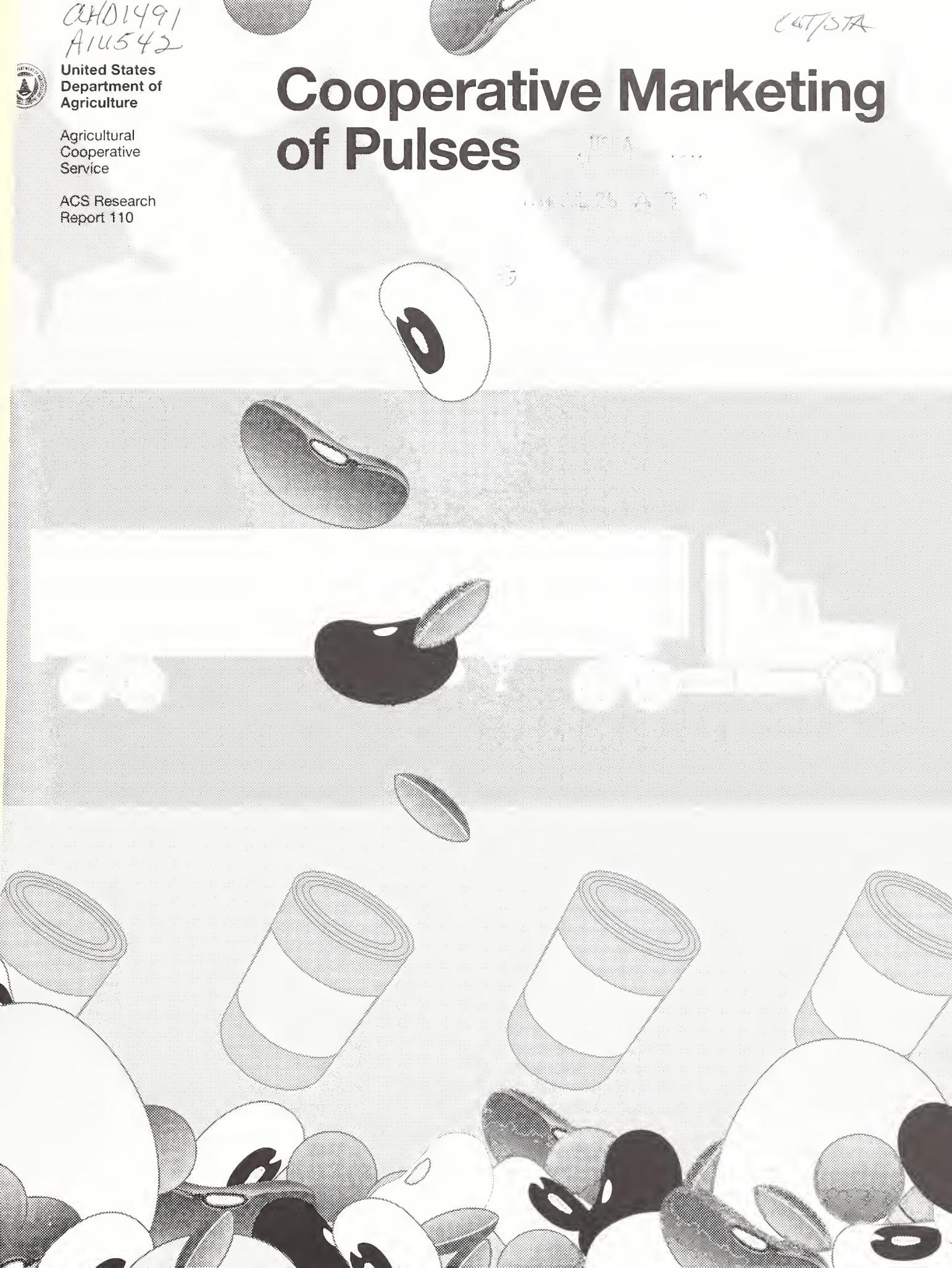


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Report 110

Cooperative Marketing of Pulses



Abstract

Cooperative Marketing of Pulses

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Pulse production in the United States is geographically specific and concentrated. Marketing channels are constantly changing, and concentration at the rehandler and processor levels continues to increase. Large proprietary companies continue to concentrate and vertically integrate. As national packagers, processors, and exporters they buy directly from pulse producers. Farmer cooperatives, as a whole, have neither kept pace with these developments nor taken advantage of the value-added benefits associated with retail marketing. Cooperatives do, however, have the potential to counteract their competition's position by pooling resources and developing marketing outlets in the domestic and export chain.

Keywords: Cooperative, pulses, dry edible beans, lentils, full-line, contract

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Preface

This report provides producers and cooperative decisionmakers with a basis for looking at their current operations and serves as a basis for comparison when policy decisions need to be made. Further, it provides users of dry edible beans, peas, and lentils with information for accessing supplies of pulses from cooperatives. It also shows changes in marketing activities since the previous report was published in 1980.

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Highlights

Cooperative marketing of pulses is a fragmented function in the cooperative community. In most instances, the marketing function is of secondary importance to the cooperative.

Significant findings from data gathered for the 1990 crop marketing season include:

- The majority of the volume handled by cooperatives is handled by full-line marketing cooperatives.
- Bulk, or large-volume units are the predominant shipping units used by cooperatives.
- Truck shipment is the predominant means of moving pulses through the marketing channels.
- Pinto beans made up the largest volume of the classes of beans handled by cooperatives.
- Cooperatives had a large market share of baby limas.
- Only 2 percent of the beans handled by cooperatives was packaged by cooperatives in retail-ready form.

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PULSE PRODUCTION

The value of pulse production—dry edible beans, peas, and lentils—averaged about \$544 million over the past 5 marketing years (1986-1990 crops). Though total pulse production represents only about 1 percent of total farm income from all crops, pulses are important as a primary or alternative crop in some States. For example, Michigan producers derived about 7 percent of their cash income from pulses in 1990, Idaho 4 percent, and Colorado about 6 percent.

The average annual production of dry edible beans for the 1986-90 crop years was 25,042,000 hundredweights (cwt), with a low production in 1988 of 19,253,000 cwt. Production for the 1980-86 period averaged 20,121,000 cwt, or about 80 percent of the more recent 5-year period.

Peas and lentils are grown in a concentrated area of the Pacific Northwest. The volume of peas and lentils produced generally declined during the 1986-90 period with the 1990 volume about 33 percent less than in 1986. Lentils showed the largest decrease, with about 1 million pounds less production in 1990 than in 1986. On a percentage basis, Austrian winter peas showed a decline of 72 percent after a slight increase in 1987. The losses were about proportional to production in the major producing States. The average production during the 1986-90 period for dry edible peas and wrinkled seeded peas was 38 percent and 5 percent, respectively, above production levels during the 1976-80 period. Production data for lentils and Austrian winter peas were not available prior to 1986.

ROLE OF COOPERATIVES IN PULSE MARKETING

Basically, two types of cooperatives provide marketing services for members growing dry edible

beans, peas, and lentils. The most prevalent type, in terms of number of cooperatives and volume marketed, are those that operate as full-line service cooperatives. These cooperatives usually took title to the product and had full marketing control over the beans. Cooperatives take title through purchase of the product, pooling arrangements, or a combination. Also included as full-line service cooperatives were those that took possession of the pulses on a consignment basis. The producers retain the "sell" decision in these cooperatives after the cooperative receives offers for a single or several lots necessary to fill an order. Within the data presented, the full-line marketing cooperative is one that handles, receives, cleans, stores, and satisfies other physical requirements associated with marketing. The cooperative may also have provided other services and/or performed other functions, such as fertilizer and chemical sales, seed distribution, rice drying, or fulfilled other related needs for members of the cooperative.

The second general type of cooperative providing services is labeled a contract handler. These cooperatives generally contract with an investor-owned firm (IOF) that is involved in dry bean, pea or lentil marketing. The cooperative receives the product from the producer and provides minimal service. The cooperative, operating as an agent for the IOF, pays the producer either from the cooperative's account or with an IOF draft, and provides loading-out of the product. The cooperative has no marketing risk in the product and receives a predetermined fee for the service provided. Generally, volumes per cooperative are fairly low compared with volume handled by full line cooperatives.

Some of the full-line cooperatives handle some classes of beans on a contract basis as well as on a full-line basis (table 1).

Classes of Beans Handled by Cooperatives

Cooperatives handle virtually all of the commercially grown classes of dry edible beans grown in the United States. In some cases, cooperatives are the major assembler while in other classes only

Table 1—Cooperatives operating on a full-line, contractual, and multiple basis, and volume handled, 1990 crop

Type of cooperative	Number of cooperatives	Volume of dry beans, peas, lentils handled (cwt)
Full-line	30	6,306,874
Contract	25	2,010,337
Full-line and contract	10	¹

¹ Included as full-line. A breakout of respective volumes was not available.

minor cooperative activity is noted. As shown in table 2, based on production estimates by USDA's National Agricultural Statistics Service (NASS), cooperatives handled 20.6 percent of the dry edible beans produced in the United States in 1990. Full-line cooperatives marketed 17.1 percent of total production, while contract handlers provided marketing services for 3.5 percent of total production. Of the major classes of beans, pinto beans accounted for 42 percent of all beans handled by cooperatives. Cooperatives handled 20.7 percent of total production of that class.

Methods of Procurement

Procurement and control of dry edible beans have changed greatly in recent years. Stated in Farmer Cooperative Service (FCS) Research Report No. 16, "Future Role of Cooperatives in Marketing Beans, Peas, and Lentils", published in 1980, "a common practice among cooperatives is for grow-

Table 2—Volume of dry-edible beans produced, cooperative volume and percent of crop handled, by cooperative type, 1990 crop

Class of bean	1990 U.S. production	Type of cooperative					
		Full-line		Contract		All cooperatives	
		Volume	Proportion	Volume	Proportion	Volume	Proportion
	----- 1,000 cwt -----		Percent	1,000 cwt	Percent	1,000 cwt	Percent
Pinto	13,532	2,346	17.3	449	3.3	82,795	20.7
Navy	6,593	1,250	19.0	382	5.8	1,632	24.8
Great Northern	2,822	137	4.9	22	0.8	159	5.6
Kidney	2,354	326	13.8	124	5.3	450	19.1
Pink	1,202	183	15.2	45	3.7	228	19.0
Blackeye	970	202	20.8	75	7.7	277	28.6
Baby Lima	550	301	54.7	40	7.3	341	62.0
Small Red	648	50	7.7	0	0	50	7.7
Black Turtle	1,082	366	33.8	0	0	366	33.8
Large Lima	458	250	54.6	0	0	250	54.6
Small White	341	45	13.2	0	0	45	13.2
Cranberry	320	43	13.4	0	0	43	13.4
Other	1,557	42	2.7	0	0	42	2.7
Total	32,429	5,541	17.1	1,137	3.5	6,678	20.6

¹ Source: Crop Production, USDA.

ers to retain title to their pulses until they decide to sell." The sales are generally to private bean handlers. Today, about 81 percent of the beans are purchased by cooperatives for further merchandising into market channels. Another 15 percent is marketed through pooling arrangements and 4 percent on a consignment basis. Many cooperatives offer more than one form of procurement. Generally, however, all of a specific class is procured under a single procurement system and some other method is used for other classes, e.g., all pintos are purchased while whites might be pooled.

Packaging of Beans by Cooperatives

For the most part, cooperatives operate as wholesale shippers of dry edible beans. From the full-line cooperatives, the beans move to a repacker to be broken down into retail-size packaging or for processing. About a third of the beans handled by cooperatives in 1990 were shipped either in bulk or in large bags containing up to 1000 pound bags. Another 56 percent was shipped in 100-pound bags. Only about 4 percent of the volume was processed (canned, etc.) or packaged in less than 10-pound bags. The contract cooperatives shipped nearly 100 percent of their volume in bulk or 100-pound bags (table 3).

Unavailability of data precluded determination of package size by class of beans.

Table 3—Package size of shipments, by cooperative type, 1990

Package size	Type of Cooperative		All cooperatives
	Full-line	Contract	
	Percent		
Bulk	27	79	36
Bulk bag	6	0	5
100-pound	56	20	50
50-kilo bag	5	1	4
50-pound bag	2	0	2
Less	4	0	3

Transportation

Movement of beans from a local cooperative to the next step in the marketing chain is via truck, rail, or barge. Truck and rail shipments amounted to about 72 and 24 percent, respectively, of total 1990 shipments (table 4). Barge shipments made up the balance. Full-line cooperatives used rail shipments for a larger proportion of total shipments than did contract cooperatives, indicating that shipments were to distant destinations.

Marketing

Most cooperatives are in a vulnerable marketing position. Cooperatives that purchase beans must depend on large packagers as their market outlet. There are no centralized markets in which the local cooperative can hedge its risk. Adding pressure on the local is the vertical integration of packagers with their local network of buying stations scattered throughout the production area competing with the local cooperatives for supply. For those cooperatives that pool or operate on a consignment basis, the risk is shared by, or transferred totally, to the producer. In most instances, a cooperative will make the majority of its sales to a single repacker or broker of beans. However, they have access to all buyers. The consignment cooperatives operate somewhat differently. These cooperatives generally supply the buyers samples of the various lots that are maintained by lot identity. The repacker/broker, or other user, makes offers on the individual lots and the producer either accepts or

Table 4—Mode of shipment of dry edible beans, by cooperative type, 1990

Shipment mode	Type of cooperative		All cooperatives
	Full-line	Contract	
	Percent		
Truck	66	99	72
Rail	29	1	24
Other	5		4

rejects the offer. In each instance, the local cooperative is the price taker, not the price setter.

Services Provided

Cooperatives offer a wide range of services to their producer members. For the 1990 marketing season, data were collected on the number of cooperatives that provided receiving and storage, cleaning, grading, and electric-eye culling in 1990 (table 5).

All cooperatives responding indicated they provided receiving and storage services. Among these cooperatives, the offered services varied widely, from cooperatives that had storage elevators dedicated only to handling beans to facilities that only provided farm truck dumps and small holding bins until trucking could be arranged to move the beans. Since the majority of the cooperatives also handled grain, part of the dumping and elevation process used existing elevation legs and dedicated silos or flat storage buildings for storage. To prevent breakage within the silo or flat storage bins, bean ladders are used in most cases.

Cooperatives that operate on a consignment basis have the unique problem of maintaining producer identity. These cooperatives used storage bins that held about 600 pounds of beans, with lot identity maintained until the beans are cleaned and bagged. Once bagged, the beans are put in storage warehouses, still maintaining lot identity.

Nearly all of the full-line cooperatives provided some sort of cleaning service. The range of operations varied from simply passing the beans over

screens to separate dirt, weed seeds, or hulls to using elaborate cleaners designed to rub the earthen particles from the seed. Generally, the type of equipment used varied with the production area and the buyers that the cooperatives used. Few of the contract cooperatives provided clean product.

Cooperatives used the USDA, FGIS, grading system to determine the grades of beans delivered by producers. Some, however, did in-house grading to determine premiums, discounts, or binning requirements for the various classes and quality of beans. All of the full-line cooperatives used either or both during their procurement and sales activities. Less than half of the contract cooperatives indicate that any grading took place at the local level.

Electric-eye culling is unique to the cooperatives that handle solid color beans. Basically, the expensive piece of equipment, through electronics, selects and separates beans within pre-determined color parameters so that off-color product is not mixed with the selected bean packages. This mechanical operation replaces the hand-pickers used in the industry's early years. Ruth Cooperative, Ruth, MI, claims to have had the first cooperative hand-picking force in the United States. Cooperative publicity in 1936 boasted that a top bean picker could pick 500 pounds of beans per day. The cooperative employed 40 full-time bean-pickers at the time.

Member Commitment

Grower agreements are a form of membership obligation to use the cooperative for marketing their product. Inversely, the cooperative is obligated to purchase or handle, as the case may be, the product delivered to the cooperative. This agreement, usually signed, is a binding legal obligation to market product through the cooperative. It furnishes the cooperative an amount of product that it can expect to receive. The cooperative can then take a position in the market if favorable markets become available. It also provides a guide for storage and other equipment that is necessary to receive and hold the product. In many areas of the country, producers are reluctant to sign grower

Table 5—Handling services provided by cooperatives, by type of cooperative, 1990

Service provided	Type of cooperative		All cooperatives
	Full-line	Contract	
	Number		
Receiving and storage	22	15	37
Cleaning	21	3	24
Grading	22	6	28
Electric-eye	6	0	6

agreements. Reluctance stems from the legal implications that might arise from writing "Act of God" clauses into contractual agreements. In other areas, producers are not willing to give up their speculative and market-seeking freedom. Of the full-line cooperatives, only four indicated that grower agreements were required. Seven of the contract cooperatives indicated that grower agreements were in effect. These were generally with the end purchaser and, with the local cooperative being the exclusive handler for the IOF, the agreement to handle carried forward to the cooperative.

ROLE OF COOPERATIVES IN PEA AND LENTIL MARKETING

Of the cooperatives that handled peas and lentils, those offering full-line services were the most active. Collectively, cooperatives handled about 75 percent of all peas, both yellow and green, produced in the United States during the 1990 crop marketing season. Full-line cooperatives handled and marketed about 39 percent of the crop, while contract cooperatives handled about 36 percent. With other types of peas, primarily Austrian winter, full-line cooperatives handled a little over 31

percent. No contract cooperative indicated any activity with these types of peas. In lentil marketing, full-line cooperatives marketed slightly more than 42 percent of the crop and contract cooperatives handled about 0.6 percent of the production.

The composite marketing of peas and lentils shows cooperatives that offered full-line services handled about 39.7 percent of the production, while contract cooperatives handled about 25.3 percent. Overall, cooperatives performed marketing services for about 65 percent of all peas and lentils produced in 1990 (table 6).

Methods of Procurement

The method of procurement used by full-line cooperatives was primarily direct purchase. Cooperatives marketing peas and lentils in 1990 took title to about 90.7 percent of the product by direct purchases from producers. Another 8.1 percent was assigned to the cooperatives through pooling arrangements and the balance through consignment procedures.

Table 6—Volume of peas and lentils produced, and volume handled and percent of crop handled by cooperatives, type of cooperative, 1990 crop

Class	1990 U.S. Production	Type of cooperative					
		Full-line		Contract		All cooperatives	
		Volume	Proportion	Volume	Proportion	Volume	Proportion
----- 1,000 cwt -----		Percent		1,000 cwt		Percent	
Green and Yellow Peas	2,372	931	39.3	848	35.7	1,779	75.0
Other Pea	127	40	31.3	0	0	40	31.3
Lentils	875	368	42.1	6	0.6	374	42.7
Total Peas and Lentils	3,374	1,339	39.7	854	25.3	2,193	65.0

¹ Source: Crop Production, USDA.

Packaging of Peas and Lentils

Cooperatives are primarily wholesale marketers of peas and lentils, with an extremely small amount packaged or processed retail-ready. Less than 0.05 percent of the product moving through cooperatives in 1990 was packaged or processed in retail-ready form. Bulk-handling was by far the major shipping procedure in moving the product from cooperatives to the marketing channels, amounting to about 55 percent of all product shipped. From contract shippers, 100 percent of the shipments were in bulk form. One-hundred-pound bags made up about 52 percent of shipments from full-line cooperatives and about 31.5 percent of shipments from all cooperatives. Full-line cooperatives packaged about 15 percent of their volume in 50-kilogram bags for movement to export channels (table 7).

Transportation

Movement of peas and lentils from local cooperatives was dominated by truck. On average, trucks were used to move about 70.5 percent of the peas and lentils. Full-line cooperatives shipped a little more than half by this mode, while contract cooperatives shipped 100 percent by truck. Full-line cooperatives used the rail and other modes

27.1 and 21.3 percent, respectively. On average, all cooperatives shipped 16.5 percent by rail and 13.0 percent by other means (table 8).

CONCLUSIONS

Pulse marketing by cooperatives is fragmented. In many instances, inter-cooperative competition is fierce when selling product to the few middle handlers in the business. This effectively reduces the price that the rehandler pays for needed product. Only three locals concentrate on packaging product and distributing it to the grocery store market. The three moved only a small percentage of the pulses they handled in packaged form. Many of the cooperatives handle a single class of product, eliminating the possibility of a full marketbasket line of product offered into the marketing channels. To take advantage of the value-added market, a form of consolidated cooperative for marketing purposes appears to be needed. This could conceivably be achieved by several of the smaller, single-type, cooperatives jointly using the facilities of a broader based local or through a regional marketing cooperative with the locals furnishing capital and volume.

Over the years, bean-handling regional cooperatives became established but did not remain in the market for long for one reason or another. Large regional cooperatives, whose primary functions are in other commodity lines, have at times been active in pulse marketing, but have not stayed with the marketing function.

Table 7—Package size of shipments of peas and lentils, by type of cooperative, 1990

Package size	Type of cooperative		All cooperatives
	Full-line	Contract	
	Percent		
Bulk	26.4	100.0	55.1
Bulk bags	1.0	0	0.6
100-pound bags	51.5	0	31.5
50-kilo bags	15.3	0	9.3
50-pound bags	5.5	0	1
10-pound bag	0.2	0	1
Less than 10 lb. bags	1	0	1
Processed	1	0	1

¹ Less than 0.05 percent

Table 8—Mode of shipment of peas and lentils, by type of cooperative, 1990

Package size	Type of cooperative		All cooperatives
	Full-line	Contract	
	Percent		
Truck	51.6	100.0	70.5
Rail	27.1	0	16.5
Other	21.3	0	13.0

Joint marketing could conceivably enable the cooperative to establish brand recognition at the retail level as well as be active in marketing wholesale at the export level, benefitting from larger pools that would be available. The joint marketing strategy could conceivably reduce the overhead costs now incurred by each of the locals in their independent marketing efforts.

Director of Cooperatives that provide marketing services for pulse producers, 1992

Cooperative Name	City	State	Type pulse handled ¹	Full-line	Contract	Receive and store	Clean	Electric eye
Cal Bean Growers Association	Ventura	CA	LL,BL,N,GN,P,K,SW, SR,B,G,C,BT,PK,L K	Yes	Yes	Yes	Yes	Yes
Stockton District Kidney Bean Sutter Basin Growers Co-op	Linden Knights Landing	CA	BL,K,PK,C	Yes	Yes	Yes	Yes	Yes
Agland, Inc.	Eaton	CO	P	Yes	Yes	Yes	Yes	Yes
Amherst Co-op Elevator	Amherst	CO	N,GN,P,K	Yes	Yes	Yes	Yes	Yes
Fowler Cooperative Assoc.	Fowler	CO	P,BT	Yes	Yes	Yes	Yes	Yes
Montrose Potato Growers	Montrose	CO	P	Yes	Yes	Yes	Yes	Yes
Olathe Potato Growers	Olathe	CO	P	Yes	Yes	Yes	Yes	Yes
Roggen Farmers Elevator	Roggen	CO	P	Yes	Yes	Yes	Yes	Yes
Southwest Colo Bean Producers	Yellow Jacket	CO	P	Yes	Yes	Yes	Yes	Yes
Stratton Equity	Stratton	CO	P	Yes	Yes	Yes	Yes	Yes
Wiggins Farmer Co-op	Wiggins	CO	P,SW,BT,PK	Yes	Yes	Yes	Yes	Yes
Crities-Moscow Growers Inc.	Moscow	ID	GP	Yes	Yes	Yes	Yes	Yes
Genesee Union Warehouse Co	Genesee	ID	GP,OP,L	Yes	Yes	Yes	Yes	Yes
Lewiston Grain Growers, Inc.	Lewiston	ID	GP,YP,L	Yes	Yes	Yes	Yes	Yes
Union Warehouse and Supply	Grangerille	ID	GP,L	Yes	Yes	Yes	Yes	Yes
B&W Cooperative	Breckenridge	MI	N,P,K,C	Yes	Yes	Yes	Yes	Yes
Cooperative Elevator	Pigeon	MI	N,P,K,SW,BT	Yes	Yes	Yes	Yes	Yes
Lapeer County Co-op, Inc.	Lapeer	MI	N	Yes	Yes	Yes	Yes	Yes
Ruth Farmers Elevator, Inc.	Ruth	MI	N,P,BT	Yes	Yes	Yes	Yes	Yes
Climax Grain Co-op Assn.	Climax	MN	N,P	Yes	Yes	Yes	Yes	Yes
Harvest States Cooperative	St. Paul	MN	N,GN,P,K	Yes	Yes	Yes	Yes	Yes
Frenchman Valley Farmers	Imperial	NB	N,GN,P	Yes	Yes	Yes	Yes	Yes
Central Valley Bean	Buxton	ND	N,P	Yes	Yes	Yes	Yes	Yes
Chaffee-Lynchburg	Chaffee	ND	N	Yes	Yes	Yes	Yes	Yes

Farmers Co-op Elevator	Reynolds	ND	N
Fessenden Co-op Association	Fessenden	ND	N,GN
Hunter Grain Company	Hunter	ND	N,P
Portland Farmers Elevator Co.	Portland	ND	N,P,BT
Agway, Inc.	Geneva	NY	BL,N,GN,P,B,BT,PK
Inland Empire	Spokane	WA	SW,GP,YP
Johnson Union Warehouse Co.	Colton	WA	GP
Oakesdale Grain Growers Inc.	Oakesdale	WA	GP,YP
Rosalia Producers, Inc.	Rosalia	WA	GP
Uniontown Cooperative Assn.	Uniontown	WA	GP
Big Horn Marketing Assn.	Greybull	WY	GN,P

¹ Type Key

LL = Large Lima
 BL = Baby Lima
 N = Navy
 GN = Great Northern
 P = Pinto
 K = Kidney
 SR = Small Red
 SW = Small White
 B = Blackeye
 BT = Black Turtle
 G = Garbanzo
 C = Cranberry
 PK = Pink
 GP = Green Pea
 YP = Yellow Pea
 OP = Other Pea
 L = Lentil

This directory is provided to furnish the names of cooperatives that provide marketing services for pulse producers. Inclusion in this listing is voluntary and only includes the names of those cooperatives that indicated they wished to be included. Therefore, it is not listing of all cooperatives that provide marketing services for pulse producers.



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Agricultural Cooperative Service (ACS) provides research, management, and educational assistance to cooperatives to strengthen the economic position of farmers and other rural residents. It works directly with cooperative leaders and Federal and State agencies to improve organization, leadership, and operation of cooperatives and to give guidance to further development.

The agency (1) helps farmers and other rural residents develop cooperatives to obtain supplies and services at lower cost and to get better prices for products they sell; (2) advises rural residents on developing existing resources through cooperative action to enhance rural living; (3) helps cooperatives improve services and operating efficiency; (4) informs members, directors, employees, and the public on how cooperatives work and benefit their members and their communities; and (5) encourages international cooperative programs.

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